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EXAMINER	
TRUONG, CAM Y T	

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/866,101	HELLMAN ET AL.	
	Examiner	Art Unit	
	Cam Y T. Truong	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35,46-78 and 89-118* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35,46-78 and 89-118* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without argument of group I claims 1-35, 46-78 and 89-118 in the reply filed on 4/8/2005 is acknowledged. Thus, Applicant's election without argument is treat as without traversal.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-35, 46-78 and 89-118 are pending in this Office Action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-16, 18, 20, 25-27, 31-35, 46-59, 61, 63, 68, 69, 70, 74-78, 90-102, 104, 106, 111, 114-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper et al (or hereinafter "Draper") (US 5878434) in view of Kavanagh et al (or hereinafter "Kavanagh") (US 5838965).

As to claim 1, Draper teaches the claimed limitations:

"a central computer " as a central computer (col. 2, lines 35-36);

"a plurality of ontology server computers" as the network 10 includes several servers (col. 3, lines 58-59);

"a server for responding to queries relating to class and relational definitions in said repository" as

"a computer network connecting said central computer with said plurality of ontology server computers" as a network connecting a central computer 28 with other computer servers 40 (fig. 2, col. 40-50; col. 13, lines 22-25).

Draper does not explicitly teach the claimed limitation " each comprising: a repository of class and relational definitions". Kavanagh teaches the retriever will send an open Knowledge base request to the knowledge base server 132. When a user first open a knowledge base, the system displays classes and subclass on a interface to a user (col. 15, lines 43-44; col. 17, lines 15-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Kavanagh's teaching of the retriever will send an open Knowledge base request to the knowledge base server 132. When a user first open a knowledge base, the system displays classes and subclass on a interface to a user in order to return classes and subclasses of the class object to a user soth a user can interact directly with classes.

As to claims 2, 47 and 90, Draper teaches the claimed limitation "wherein at least one relation definition within an ontology server computer references classes from a different ontology server computer" as (col. 6, lines 1-50).

As to claims 3, 48 and 91, Draper teaches the claimed limitation "wherein said repositories also contain superclass and subclass relationships" as (col. 6, lines 1-50).

As to claims 4, 49 and 92, Draper teaches the claimed limitation "wherein at least one superclass and subclass relationship resides on a different ontology server computer than the ontology server computer containing the subclass and the ontology server computer containing the superclass" as (fig. 2, col. 5, lines 10-60).

As to claims 5, 50, 93, Draper and Kavanagh teaches the claimed limitation subject matter in claim 1, Kavanagh further teaches the claimed limitation "wherein at least one of said plurality of server computers further comprise a publisher for publishing class and relation definitions in said repository to said global ontology directory" as (col. 18, lines 25-45).

As to claims 6, 51, and 94, Draper teaches the claimed limitation "wherein said central computer further comprises an agent for seeking out class and relation definitions included in said repositories" as (col. 5, lines 5-60; col. 6, lines 1-40).

As to claims 7, Draper teaches the claimed limitation "comprising an authoring tool for aid repositories" as (fig. 2).

As to claims 8, 96 and 53, Draper teaches the claimed limitation "wherein said authoring tool has the capability to browse repositories of a plurality of ontology server computers" as (fig. 2, col. 13, lines 40-65).

As to claims 9, 54 and 97, Draper teaches the claimed limitation "wherein said authoring tool comprises a validator for ensuing that updates made to said repositories maintain backward compatibility, so that expressions that are currently valid remain valid after the updates are made" as (col. 42, lines 30-60).

As to claims 10, 55 and 98, Draper and Kavanagh teaches the claimed limitation subject matter in claim 1, Kavanagh further teaches the claimed limitation "wherein said authoring tool further comprises a class adder for adding new class definitions to said repositories" as (col. 18, lines 20-55).

As to claims 11, 56, and 99, Draper and Kavanagh teaches the claimed limitation subject matter in claim 1, Kavanagh further teaches the claimed limitation "claim wherein said authoring tool further comprises a class editor for editing class definitions in said repositories" as (col. 18, lines 20-55).

As to claims 12, 57, and 100, Draper and Kavanagh teaches the claimed limitation subject matter in claim 1, Kavanagh further teaches the claimed limitation "wherein said authoring tool further comprises a relation adder for adding relation definitions to said repositories" as (col. 8, lines 20-21).

As to claims 13, 58 and 101, Draper and Kavanagh teaches the claimed limitation subject matter in claim 1, Kavanagh further teaches the claimed limitation

"wherein said authoring tool further comprises a relation editor for editing relation definitions in said repositories, by expanding domains of relations" as (col. 42, lines 1-50).

As to claims 14, 59 and 102, Draper teaches the claimed limitation "a search engine for searching for class or relation definitions" as (col. 88, lines 20-21).

As to claim 15, Draper teaches the claimed limitation "wherein said search engine resides on at least one of said plurality of ontology server computers" as (col. 8, lines 20-21, fig. 2).

As to claim 16, Draper teaches the claimed limitation "wherein said search engine resides on said central computer" as (col. 38, lines 55-67).

As to claims 18, 61,and 104 Draper teaches the claimed limitation "wherein the class and relation definitions in said repository include authorship data" as (col. 8, lines 1-60).

As to claims 20, 63 and 106, Draper teaches the claimed limitation "a text file embedder for embedding a text file having a description of a class within a repository" as (col. 8, lines 2-60, col. 9 lines 40-55).

As to claims 25, 68 and 111, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation "a view generator for generating a view of a class by, by associating with the class a subset of attributes of the class" as (figs. 5&6).

As to claims 26 and 69, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation "wherein the subset of attributes of the class includes composed functions" (figs. 5&6).

As to claims 27 and 70, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation "wherein at least one attribute in the subset of attributes is further associated with a view of the co-domain of the attribute" as (figs. 5&6).

As to claims 31, 74 and 114, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation "a class and relation navigation tool for guiding the user in choosing classes and relations" as (col. 44, lines 30-65).

As to claims 32, 75 and 115, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation" a

designator for designating classes and relations that are required and for designating classes and relations that are optional" as (col. 44, lines 30-65).

As to claims 33, 76 and 116, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation "a graphical user interface including icons for displaying instances of classes" as (figs. 5&8).

As to claims 34, 77 and 117, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation "wherein said graphical user interface also includes icons for displaying sets of instances defined by a logical term" as (figs. 5&6).

As to claims 35, 78 and 118, Draper and Kavanagh disclose the claimed limitation subject matter in claim 1, Kavanagh further teach the claimed limitation" an ontology navigation tool for viewing class and relation definitions" as (figs. 5&6).

As to claim 46, Draper teaches the claimed limitations:

"managing a plurality of repositories of class and relation definitions" as (col. 5, lines 5-60);

" managing a global ontology directory" as (col. 2, lines 35-36).

Draper does not explicitly teaches the claimed limitation "responding to queries relating to class and relation definitions in at least one repository". Kavanagh teaches the retriever will send an open Knowledge base request to the knowledge base server 132. When a user first open a knowledge base, the system displays classes and subclass on a interface to a user (col. 15, lines 43-44; col. 17, lines 15-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Kavanagh's teaching of the retriever will send an open Knowledge base request to the knowledge base server 132. When a user first open a knowledge base, the system displays classes and subclass on a interface to a user in order to return classes and subclasses of the class object to a user soth a user can interact directly with classes.

As to claims 52 and 95, Draper teaches the claimed limitation "comprising updating the repositories" as (col. 29, lines 45-67).

As to claim 89, Draper teaches the claimed limitation.
" a global ontology directory" as a central computer (col. 2, lines 35-36);
"a plurality of repositories of class and relation definitions" as (col. 5, lines 5-60).

Draper does not explicitly teach the claimed limitation " and a server for responding to queries relating to class and relation definitions in said repositories".

Kavanagh teaches the retriever will send an open Knowledge base request to the knowledge base server 132. When a user first open a knowledge base, the system

displays classes and subclass on a interface to a user (col. 15, lines 43-44; col. 17, lines 15-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Kavanagh's teaching of the retriever will send an open Knowledge base request to the knowledge base server 132. When a user first open a knowledge base, the system displays classes and subclass on a interface to a user in order to return classes and subclasses of the class object to a user soth a user can interact directly with classes.

4. Claim 17, 60, and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper et al (or hereinafter "Draper") (US 587843) in view of Kavanagh et al (or hereinafter "Kavanagh") (US 5838965) and further in view of Tenorio et al (or hereinafter "Tenorio") (US 6708161).

As to claims 17, 60, and 103, Draper does not explicitly teach the claimed limitation "a search tool, for searching said global ontology directory; and a query tool for querying at least one of said plurality of repositories". Tenorio teaches searching a global content directory and searching seller databases 32 (col. 10, lines 65-67; col. 11, lines 1-15). It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Tenorio's teaching of searching a global content directory and searching seller databases 32 to Draper's system in order to return a correct result to a user corresponding user's query.

5. Claims 19, 62, and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper et al (or hereinafter "Draper") (US 587843) in view of Kavanagh et al (or hereinafter "Kavanagh") (US 5838965) and further in view of Black et al (or hereinafter "Black") (US 6735585).

As to claims 19, 62, and 105, Draper does not explicitly teach the claimed limitation "a web filter for generating a filtered ontology based on constraints on authorship data". Black teaches a web filter (figs 8-9).
It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Black's teaching of a web filter to Draper's system in order to eliminate information that does not meet search criteria..

6. Claims 21-24, 28-30, 64-67, 71-73, 107-109, 110, 112 and 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draper et al (or hereinafter "Draper") (US 587843) in view of Kavanagh et al (or hereinafter "Kavanagh") (US 5838965) and further in view of Sundaresan (US 6569207).
As to claims 21, 64, and 107, Draper does not explicitly teach the claimed limitation "an XML embedder for embedding an XML Schema within a designated repository by identifying class and relation definitions implicit in the XML Schema". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claims 22, 65 and 108, Draper does not explicitly teach the claimed limitation "wherein said XML embedder identifies class and relation definitions with aid of a user choosing which classes and relations implicit in the XML Schema are to be included within the designated repository". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).
It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claims 23, 66 and 109, Draper does not explicitly teach the claimed limitation "an XML embedder for embedding an XML Schema within a designated repository by converting the XML Schema into class and relation definitions". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).
It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claims 24, 67 and 110, Draper does not explicitly teach the claimed limitation "wherein said XML embedder converts the XML Schema into class and relation definitions with aid of a user choosing which classes and relations implicit in the XML Schema are to be included within the designated repository". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claims 28 and 71, Draper does not explicitly teach the claimed limitation "an XML generator for generating a single XML Schema type element from the view". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claims 29 and 72, Draper does not explicitly teach the claimed limitation " an XML generator for generating an XML Schema from the view". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claims 30, 73 and 113, Draper does not explicitly teach the claimed limitation "wherein said XML generator generates an XML Schema with aid of a user choosing which classes and relations are to be included within the XML Schema. Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML schema in repository to Draper's system in order to convert data from one format to XML format.

As to claim 112, raper does not explicitly teach the claimed limitation "wherein said view generator is an XML generator for generating an XML schema from class and relational definitions". Sundaresan teaches the embedding an XML schema in repository (col. 11, lines 55-67; col. 12, lines 1-15).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sundaresan's teaching of the embedding an XML

schema in repository to Draper's system in order to convert data from one format to XML format.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sonderegger et al (US 6173289).

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Firday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cam Truong

Cam Y T Truong
Examiner
Art Unit 2162

6/20/2005